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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,665	09/23/2003	Jean-Claude Yvin	16721-0240 (42528-292744)	1061
881	7590	07/11/2006	EXAMINER MAIER, LEIGH C	
STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			ART UNIT 1623	PAPER NUMBER

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,665	YVIN ET AL.	
	Examiner	Art Unit	
	Leigh C. Maier	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-11 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

Claim 2 has been cancelled. Claim 1 has been amended. Claims 1 and 3-11 are pending. Claim 11 has been withdrawn from consideration as being drawn to a non-elected invention. Any objection or rejection not expressly repeated has been withdrawn. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1, 3, 5-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yvin et al (WO 99/39718) in view of Kim et al (Carbohydr. Res., 2000).

The examiner has reconsidered the overall teaching of Yvin. As discussed previously, Yvin teaches the method the treatment of disorders resulting from apoptosis dysfunction comprising the administration of β -glucan oligosaccharides. The reference describes cancer as one such disorder. See reference claim 8 and the paragraph bridging pages 3 and 4. The activities recited in claims 5 and 6 are inherent activities that would result from the administration of the oligosaccharide whether or not it was recognized in the original reference. The reference describes the oligosaccharides contemplated as branched or linear (1,3)- β -glucans having 3 to 150 monosaccharides in the backbone. See Formula I at page 5. The reference further suggests the use of oligosaccharides resulting from the depolymerization of laminarian. See reference claim 5. The reference does not exemplify the use of oligosaccharides recited in the instant claims.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select any of the oligosaccharides described by Yvin to administer for their art-disclosed utility of the treatment of cancer. The artisan would be motivated to select oligosaccharides in the size range of the instant method because they are commercially available and soluble for ease of administration to the patient. See Kim at Table 1 and the 1st paragraph in section 2. One of ordinary skill would have a reasonable expectation of success in using these lower oligosaccharides for the treatment of cancer because Yvin had disclosed this utility. There may be some unexpected results in the use of the recited oligosaccharides, but none has been demonstrated. It would be within the scope of the practitioner to select an appropriate method of administration through routine experimentation.

Claims 1, 3-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yvin et al (WO 99/39718) in view of Kim et al (Carbohydr. Res., 2000) and further in view of Hillman et al (US 5,858,715).

Yvin and Kim teach as set forth above. The references are silent regarding particular types of cancer.

Hillman teaches the treatment of diseases comprising impaired apoptosis. These include a variety of cancers, such as lung, breast, ovarian, and colon. See abstract and col 16, lines 43-53.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the recited oligosaccharides to treat the cancers taught by Hillman to comprise decreased apoptosis. One of ordinary skill would reasonably expect success in such treatment because Yvin had taught that the oligosaccharides have utility in such treatment. It

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would further be within the scope of the artisan to select any appropriate method of administration with routine experimentation.

Claims 1, 3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yvin et al (WO 99/39718) in view of Kim et al (Carbohydr. Res., 2000) and further in view of in view of Penney et al (US 5,688,771).

Yvin and Kim teach as set forth above. The references are silent regarding the use of other therapeutic agents in combination with the oligosaccharides.

Penney teaches the use of immunodulatory peptides, alone, or in combination with chemotherapeutic agents for the treatment of cancer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to administer the oligosaccharides taught by Yvin in combination with an immunomodulatory agent and/or a chemotherapeutic agent. Given that all these agents are known to have utility in for the treatment of cancer, the artisan would be motivated to administer them in combination for their combined effects. It would further be within the scope of the artisan to select any appropriate method of administration with routine experimentation.

Double Patenting

Claims 1, 3-7 and 10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 14 of U.S. Patent No. 6,750,208 in view of Kim et al (Carbohydr. Res., 2000).

Although the conflicting claims are not identical, they are not patentably distinct from each other. The reference claim is drawn to the treatment of apoptosis dysfunctions by the administration of β -glucan oligosaccharides. The specification describes apoptosis dysfunctions as comprising cancer. See col 2, lines 27-31. Therefore, it would have been obvious to one having ordinary skill to administer said oligosaccharides for the treatment of cancer. The specification defines "oligosaccharide" as branched or linear (1,3)- β -glucans having 3 to 150 monosaccharides in the backbone. The artisan would be motivated to select oligosaccharides in the size range of the instant method because they are commercially available and soluble for ease of administration to the patient. See Kim at Table 1 and the 1st paragraph in section 2. It would be within the scope of the artisan to select any method of administration through routine experimentation.

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Examiner's hours, phone & fax numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Thursday, and Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Anna Jiang (571) 272-0627, may be contacted. The fax number for Group 1600, Art Unit 1623 is (571) 273-8300.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

Leigh C. Maier

Leigh C. Maier
Primary Examiner
July 7, 2006